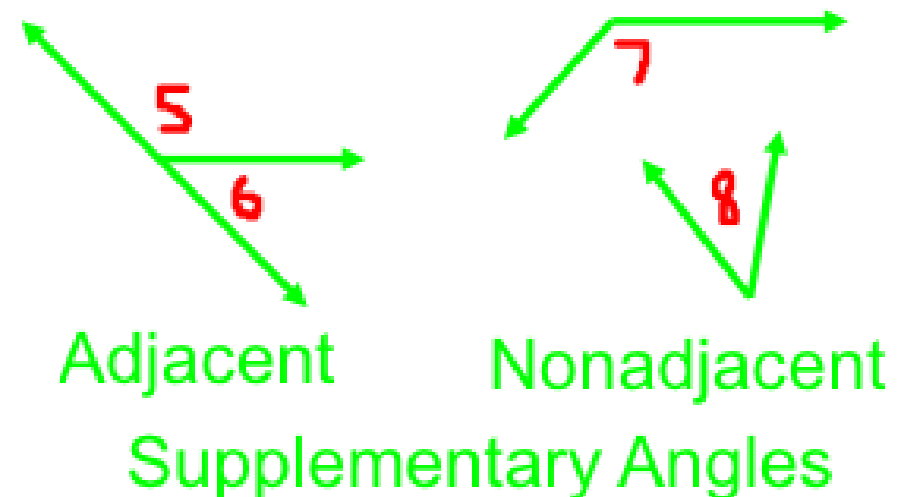
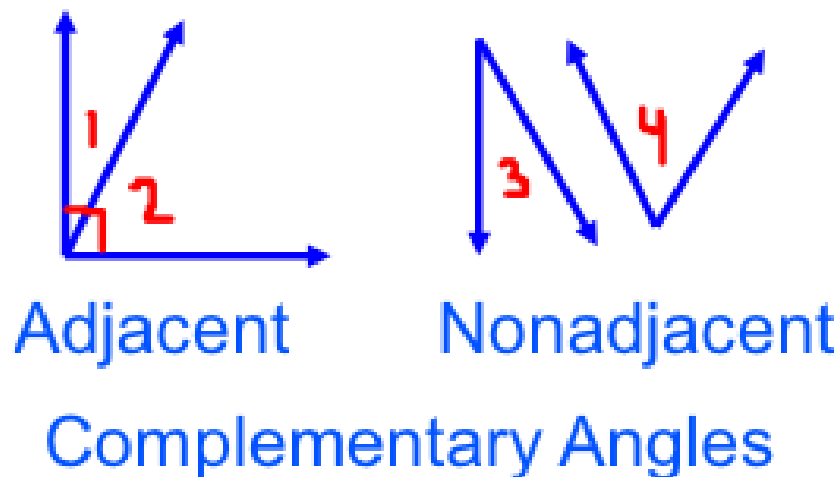


1.5 - Describe Angle Pair Relationships

Complementary Angles: sum of the measure of two angles is 90°

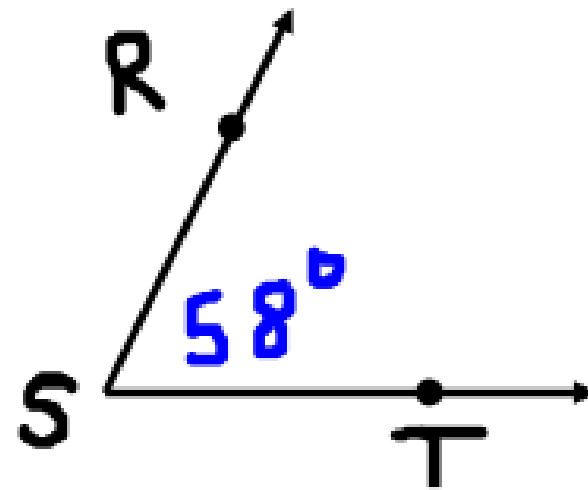
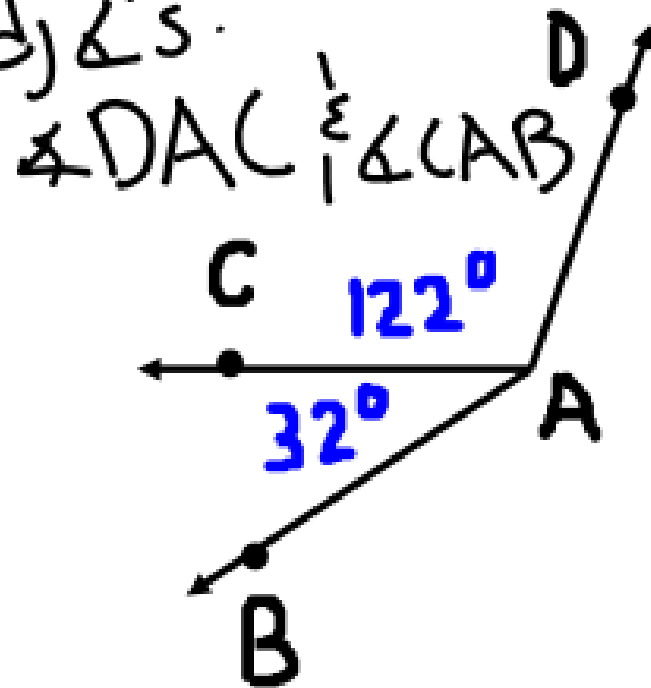
Supplementary Angles: sum of the measure of two angles is 180°

Adjacent Angles: two angles that share a common vertex and side, but have no common interior points



Ex 1: Name a pair of complementary angles, a pair of supplementary angles, and a pair of adjacent angles

adj. \angle 's:



Comp. \angle 's: $\angle CAB$ & $\angle RST$

Supp. \angle 's: $\angle CAD$ & $\angle RST$

Ex 2: Given that $\angle 1$ is a complement of $\angle 2$ and $m\angle 1 = 70^\circ$,
find $m\angle 2$

$$m\angle 1 + m\angle 2 = 90^\circ$$

$$\begin{array}{rcl} 70^\circ + m\angle 2 & = & 90^\circ \\ -70^\circ & & -70^\circ \end{array}$$

$$m\angle 2 = 20^\circ$$

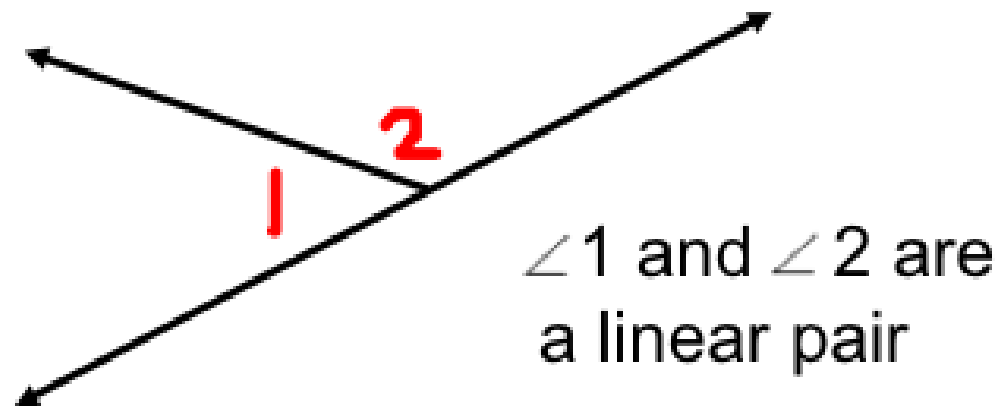
Ex 3: Given that $\angle 3$ is a supplement of $\angle 4$ and $m\angle 4 = 60^\circ$,
find $m\angle 3$

$$m\angle 3 + m\angle 4 = 180^\circ$$

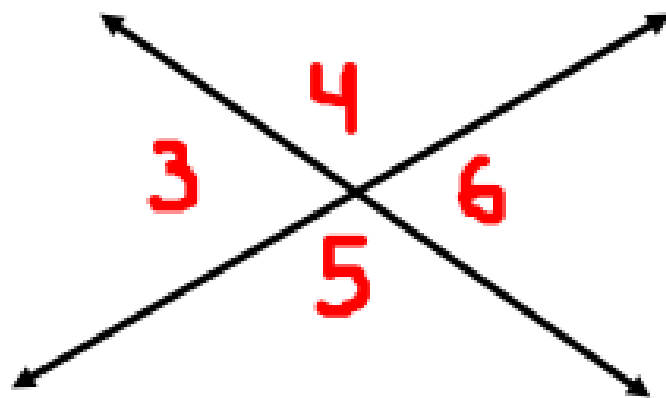
$$\begin{array}{r} m\angle 3 + 60^\circ = 180^\circ \\ - 60^\circ \quad - 60^\circ \\ \hline \end{array}$$

$$m\angle 3 = 120^\circ$$

Linear Pair: two adjacent angles whose noncommon sides are opposite rays



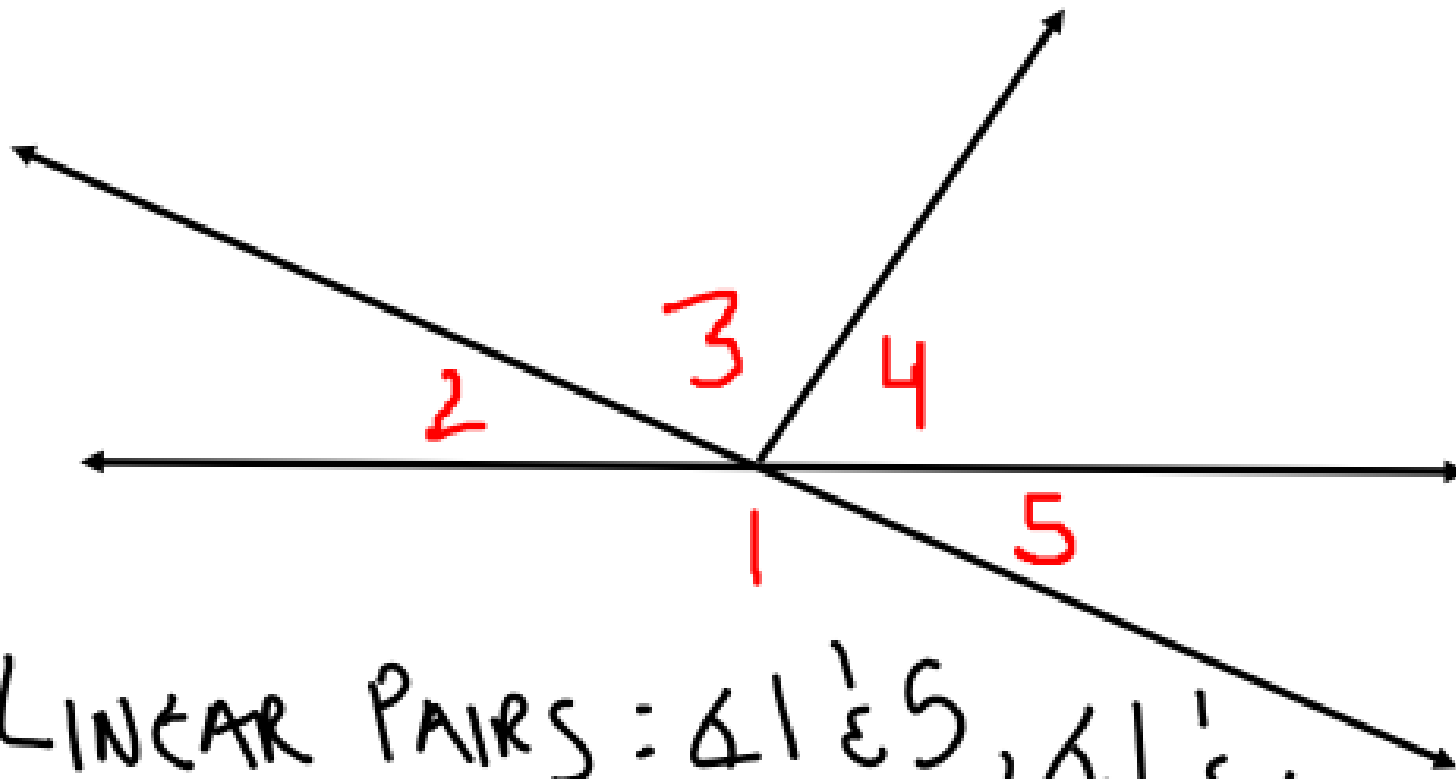
Vertical Angles: two angles whose sides form two pairs of opposite rays



$\angle 3$ and $\angle 6$ are vertical angles

$\angle 4$ and $\angle 5$ are vertical angles

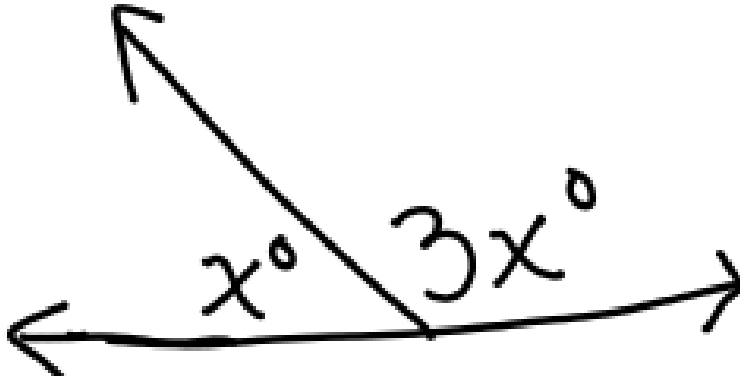
Ex 4: Identify all of the linear pairs and vertical angles



LINEAR PAIRS: $\angle 1$ & $\angle 5$, $\angle 1$ & $\angle 2$

VERTICAL \angle 'S: $\angle 2$ & $\angle 4$

Ex 5: Two angles form a linear pair. The measure of one angle is 3 times the measure of the other. Find the measure of each angle.



A diagram showing a straight line with a ray originating from a point on the line, dividing it into two adjacent angles. The top angle is labeled x° and the bottom angle is labeled $3x^\circ$.

$$3x^\circ + x^\circ = 180^\circ$$
$$\frac{4x^\circ}{4} = \frac{180^\circ}{4}$$
$$x = 45^\circ$$
$$3(45) = 135^\circ$$

Homework: p.38 #1, 2-38 even